

## CLAIMS

1. A gradient coil structure for use in MRI apparatus, said coil structure comprising a main gradient coil and a shielding coil, said shielding coil having a  
5 portion thereof disposed outwardly from the main gradient coil and said coils being configured so that in a peripheral region relative to the imaging volume, the coils are almost coincident, wherein, the coils in the coincident region extend forwardly at an angle to the remainder of the main coil so that the main coil appears concave from the imaging volume.
- 10 2. A gradient coil structure according to claim 1 wherein, in use, some net current flows in the coils of the coincident region.
3. A gradient coil structure according to claim 1 wherein the shielding coil  
15 is generally conical.
4. A gradient coil structure according to claim 1 wherein the central region of the main coil is planar and the angle between the coincident region and central region of the main coil is obtuse.
- 20 5. An MRIS apparatus including a gradient coil structure according to any preceding claim.